

NetSure 211 Ordering Guide

-48 VDC Power Solutions – Mini System

NetSure™ 211 Series

The NetSure 211 Series of compact –48 VDC power systems combines reliable rectifiers with an advanced Ethernet-accessible controller. Engineered for mini power applications, the system is available in two models. Both models feature centralized control, flexible distribution and high power density for a range of DC applications.

The 1 RU model allows for up to three 1000-watt 48 VDC rectifiers for a total of 3000 watts of power conversion in 23" and up to 2000 watts in a 19" configuration. The units include single AC feeds for 120 VAC or 208/240 VAC inputs. The 2 RU model allows for up to six 1000-watt 48 VDC rectifiers for a total of 6000 watts of power conversion in 23" and up to 4000 watts in a 19" configuration. Dual AC feeds are available for 120 VAC or 208/240 VAC inputs.

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Requester Contact Information:	
Name:*	Company:*
Title:*	Email/Phone:*

* These are required fields. Please complete before submitting the form.

Table A. Calculate the Number of Batteries and Rectifiers Needed

Enter the name, quantity and power consumption of each power system. The chart below will calculate the total power consumption for each type of equipment entered as well as the number of batteries and rectifiers needed for the system.





Equipment Name	Qty.	Power Consump. Each (Watts)	Power Consump. Total (Watts)	
				Total 48 VDC Load in Watts:
				Battery Strings Required:
				48 VDC, # of 40 A-Hr strings for 4 hour backup
				48 VDC, # of 40 A-Hr strings for 8 hour backup
				48 VDC, # of 105 A-Hr strings for 4 hour backup
				48 VDC, # of 105 A-Hr strings for 8 hour backup
				48 VDC, # of 155 A-Hr strings for 4 hour backup
				48 VDC, # of 155 A-Hr strings for 8 hour backup
				48 VDC, # of 180 A-Hr strings for 4 hour backup
				48 VDC, # of 180 A-Hr strings for 8 hour backup
				NetSure™ 211 Indoor System Rectifiers:
				# of 500 watt rectifiers needed at 120 VAC input
				# of 500 watt rectifiers needed at 240 VAC input
				NetSure™ 211 Indoor System Rectifiers:
				# of 1000 watt rectifiers needed at 120 VAC input
				# of 1000 watt rectifiers needed at 240 VAC input

Note 1: Rectifier quantity includes one redundant unit for each.

Note 2: Power levels used for calculation are based on minimum available power per unit at minimum operating voltage 42 VDC at ambient of 45 °C.

Note 3: Battery parameters used in this chart are from Exide. Other vendor batteries may have different parameters.

Table B. Select a System Based on the Number of Rectifiers & Distribution Type Required

System	Shelf Size	Number of Rectifiers	Distribution	
Configuration 1	19" x 1 RU	Up to 2 rectifiers	10 GMT fuse positions	
Configuration 1	23" x 1 RU	Up to 3 rectifiers	10 GMT fuse positions	
Configuration 2	19" x 2 RU	Up to 4 rectifiers	Up to 4 load breakers or Up to 17 GMT fuses	
Configuration 2	23" x 2 RU	Up to 6 rectifiers	Up to 4 load breakers or Up to 17 GMT fuses	

Note: Click the system name to jump to that section.

For additional information or questions visit or call:

Web: www.EmersonEnergy.com ■ **Tel:** 1-800-800-1280 (USA and Canada)

Netsure 211 Ordering Guide

-48 VDC Power Solutions – Mini System



NetSure 211 – 23" Shelf, 1 RU



NetSure 211 – 19" Shelf, 1 RU

Configuration 1. NetSure™ 211 – 1 RU, Up to 40 A (N+1)

Catalog Number	Part Number	Quantity	Description	Shelf Size
Step 1a: Choose Rectifier Shelf (includes SCU+ controller and space for distribution module)				
	58213660001		NetSure 211 power system shelf	19" x 1 RU
	58213660002		NetSure 211 power system shelf	23" x 1 RU
Step 1b: Select Distribution, 1 required per rectifier shelf				
	582136600NG		(10) GMT fuse output, no LVD	
	582136600BG		(10) GMT fuse output, battery LVD	
Step 1c: Select Line Cord, 1 required per shelf				
	545478*		14' AC cord, 120 VAC, 5-15P fits wall outlet	
	545252		14' AC cord, 120 VAC twist-lock L5-30P	
	540946		14' AC cord, 208/240 VAC twist-lock L6-30P	
* This cord is for use with 1R48500 rectifiers and the 19" shelf only.				
Step 1d: Select up to 2 Temperature Probes if Required - One Battery and One Ambient				
	58213660090		3 meter temperature probe	
	58213660091		10 meter temperature probe	
Step 1e: Select Rectifier Quantity (Up to 2 rectifiers per 19" shelf or Up to 3 rectifiers per 23" shelf)				
	1R48500		500 watt (10 amp) rectifier	
	1R481000		1000 watt (20 amp) rectifier	
Note: 1000 W rectifier de-rates to 500 W with 120 volt AC input.				
Step 1f: Select Up to 10 Fuses if Required				
	248610301		0.18 A fuse	
	248610200		0.25 A fuse	
	248610300		0.5 A fuse	
	248610500		0.75 A fuse	
	248610700		1.33 A fuse	
	248610800		2 A fuse	
	248610900		3 A fuse	
	248611000		5 A fuse	
	248611300		7.5 A fuse	
	248611200		10 A fuse	
	248611500		15 A fuse, max load of 70% or 10.5 A	

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Configuration 1 (continued)

Catalog Number	Part Number	Quantity	Description
Step 1g: Select Battery Cables if Required			
	58213660071		8 AWG battery cable for (1) battery string
	58213660072		10 AWG battery cable for (2) battery strings
Step 1h: Select Battery Cabinet if Required			
	554631		Wall or rack-mounted battery cabinet, holds (4) 40 Amp-hour, M12V40F batteries
Step 1i: Select Battery Tray if Required			
	582136700SK001		19" battery tray that accepts M12V105FT batteries. Kit includes tray, battery disconnect box, 100 A disconnect
	582136700SK002		23" battery tray that accepts M12V155FT and M12V180FT batteries. Kit includes tray, battery disconnect box, 100 A disconnect
Step 1j: Select Wall Mounting Kit if Required			
	541285		Wall mount kit (allows the power system to mount to wall) Can be mounted vertically or horizontally and includes mounting hardware
	552537		19" wall mount kit, provides 6 RU of mounting space, equipment mounts horizontally in rack
	552535		23" wall mount kit, provides 6 RU of mounting space, equipment mounts horizontally in rack

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NetSure 211 – 23" Shelf, 2 RU



NetSure 211 – 19" Shelf, 2 RU

Configuration 2. NetSure™ 211 – 2 RU, Up to 100 A (N+1)

Catalog Number	Part Number	Quantity	Description	Shelf Size
Step 2a: Choose Rectifier Shelf (includes ACU+ controller and space for distribution)				
	58213660005		NetSure 211 power system shelf	19" x 2 RU
	58213660006		NetSure 211 power system shelf	23" x 2 RU
Step 2b: Select Distribution, 1 required per rectifier shelf				
	582136600NA		(2) Load breaker positions, (2) battery breaker positions and (5) GMT fuse positions (10 A max), no LVD	
	582136600BA		(2) Load breaker positions, (2) battery breaker positions and (5) GMT fuse positions (10 A max), battery LVD	
	582136600NC		(4) Load breaker positions and (5) GMT fuse positions (10 A max), no LVD	
	582136600BC		(4) Load breaker positions and (5) GMT fuse positions (10 A max), battery LVD	
	582136600LC		(4) Load breaker positions and (5) GMT fuse positions (10 A max), load LVD	
	582136600NF		(5) 10 A GMT fuse positions and (8) 15 A GMT fuse positions, no LVD	
	582136600BF		(5) 10 A GMT fuse positions and (8) 15 A GMT fuse positions, battery LVD	
Step 2c: Select GMT Fuse Module if Required				
	545332		(6) position GMT fuse position option board, takes up (2) load breaker positions	
Note: Up to (1) for Lists NA and BA. Up to (2) for Lists NC, BC, LC. Cannot be used in Lists NF and BF.				
Step 2d: Select Line Cord, 2 required per shelf				
	545478 *		14' AC cord, 120 VAC, 5-15P fits wall outlet	
	545252		14' AC cord, 120 VAC twist-lock L5-30P	
	540946		14' AC cord, 208/240 VAC twist-lock L6-30P	
* This cord is for use with 1R48500 rectifiers and the 19" shelf only.				
Step 2e: Select up to 2 Temperature Probes if Required (one battery and one ambient or two battery)				
	58213660090		3 meter temperature probe	
	58213660091		10 meter temperature probe	
Step 2f: Select GMT Lead Assemblies if Using GMT Fuses in Distribution (not required for 545332)				
	58213660060		GMT lead assembly for (5) 10 A GMT fuses	
	58213660061		GMT lead assembly for (8) 10 A GMT fuses for lists NF and BF	
	58213660062		GMT lead assembly for (5) 15 A GMT fuses for lists NF and BF	
Step 2g: Select Rectifier Quantity (Up to 4 rectifiers per 19" shelf or Up to 6 rectifiers per 23" shelf)				
	1R48500		500 watt (10 amp) rectifier	
	1R481000		1000 watt (20 amp) rectifier	

Note: 1000 watt rectifier de-rates to 500 watts with 120 volt AC input.

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Configuration 2 (continued)

Catalog Number	Part Number	Quantity	Description	Catalog Number	Part Number	Quantity	Description
Step 2h: Select Breakers if Required *				Step 2i: Select Fuses if Required			
	101599		10 A breaker		248610301		0.18 A fuse
	101600		15 A breaker		248610200		0.25 A fuse
	101601		20 A breaker		248610300		0.5 A fuse
	101602		25 A breaker		248610500		0.75 A fuse
	101603		30 A breaker		248610700		1.33 A fuse
	101604		35 A breaker		248610800		2 A fuse
	101605		40 A breaker		248610900		3 A fuse
	121997		45 A breaker		248611000		5 A fuse
	101606		50 A breaker		248611300		7.5 A fuse
	101607		60 A breaker		248611200		10 A fuse
	101608		70 A breaker		248611500		15 A fuse, max load of 70% or 10.5 A
	101609		75 A breaker				
	121995		80 A breaker				
	101610		100 A breaker				

* See System Application Guide for any spacing requirements.

Catalog Number	Part Number	Quantity	Description
Step 2j: Select Battery Cables if Required			
	58213660065		2 AWG battery cable, shelf side
	58213660066		2 AWG battery cable, battery side
	58213660067		8 AWG battery cable, shelf side (connects to shelf and 554631 battery cabinet)
Step 2k: Select Battery Cabinet if Required			
	554631		Wall or rack-mounted battery cabinet, holds (4) 40 Amp-hour, M12V40F batteries
Step 2l: Select Battery Tray if Required			
	582136700SK001		19" battery tray that accepts M12V105FT batteries. Kit includes tray, battery disconnect box, 100 A disconnect
	582136700SK002		23" battery tray that accepts M12V155FT and M12V180FT batteries. Kit includes tray, battery disconnect box, 100 A disconnect
Step 2m: Select Wall Mounting Kit if Required			
	553203		Wall mount kit (allows power system shelf to mount flat to wall)
	552537		19" wall mount kit, provides 6 RU of mounting space, equipment mounts horizontally in rack
	552535		23" wall mount kit, provides 6 RU of mounting space, equipment mounts horizontally in rack

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